

What is claimed is:

1. A control device for a vehicle comprising:
road surface obtaining means for obtaining a value according to a height difference in the vertical direction on a road surface, on which a vehicle runs, between a contact position of wheels at the left side of the body and a contact position of wheels at the right side of the body;
specific process executing means for executing a specific process for preventing a roll angle of the vehicle from being excessive when the obtained value according to the height difference becomes a value showing that the height difference is greater than a predetermined value.

2. A control device for a vehicle claimed in Claim 1, wherein the road surface obtaining means is provided with:
motion state quantity obtaining means for obtaining motion state quantity showing a motion state of the vehicle;
estimated lateral acceleration calculating means for calculating, as an estimated lateral acceleration, an estimated value of a lateral acceleration that is a component of the acceleration exerted on the vehicle in the lateral direction of the vehicle body, based upon the obtained motion state quantity; and
a lateral acceleration sensor for obtaining the actual value of the lateral acceleration as an actual lateral acceleration by detecting the value of the component of external force exerted on the vehicle in the lateral direction of the vehicle body; wherein
the road surface obtaining means is configured to obtain the value

according to the height difference based upon the result of the comparison between the calculated estimated lateral acceleration and the obtained actual lateral acceleration.

3. A control device for a vehicle claimed in Claim 2, wherein
the road surface obtaining means is configured to obtain the value according to the height difference based upon a difference between the calculated estimated lateral acceleration and the obtained actual lateral acceleration.
4. A control device for a vehicle claimed in Claim 2, wherein
the specific process executing means is configured to execute the specific process when the obtained value according to the height difference becomes the value showing that the height difference is greater than the predetermined value, and when the value of the obtained actual lateral acceleration is greater than the value of the calculated estimated lateral acceleration.
5. A control device for a vehicle claimed in Claim 2, wherein
the motion state quantity obtaining means is configured so as to obtain the wheel speed of each wheel of the vehicle as the motion state quantity, and
the estimated lateral acceleration calculating means is configured to calculate the estimated lateral acceleration based upon the difference between the wheel speed of the wheels at the left side of the vehicle body and the wheel speed of the wheels at the right side of the vehicle body.

6. A control device for a vehicle claimed in Claim 5, wherein
the estimated lateral acceleration calculating means is configured to
calculate the estimated lateral acceleration based upon the difference
between the average of the wheel speeds of the front-left and rear-left
wheels and the average of the wheel speeds of the front-right and rear-right
wheels.
7. A control device for a vehicle claimed in Claim 1, wherein
the road surface obtaining means is configured to obtain a value
showing a degree of inclination of the road surface, on which the vehicle
runs, in the body roll direction as the value according to the height
difference.
8. A control device for a vehicle claimed in Claim 2, wherein
the road surface obtaining means is configured to obtain a value
showing a degree of inclination of the road surface, on which the vehicle
runs, in the body roll direction as the value according to the height
difference.
9. A control device for a vehicle claimed in Claim 1, wherein
the specific process executing means is configured to execute at
least one of a process for producing an alarm and a process for decelerating
the vehicle as the specific process.
10. A control device for a vehicle claimed in Claim 2, wherein

the specific process executing means is configured to execute at least one of a process for producing an alarm and a process for decelerating the vehicle as the specific process.

11. A control device for a vehicle claimed in Claim 10, wherein the process for decelerating the vehicle includes a process for producing braking force on the wheels of the vehicle by a brake fluid pressure regardless of an operation of a brake pedal and / or a process for reducing a power from a power source of the vehicle.

12. A control device for a vehicle claimed in Claim 10, wherein the specific process differs depending upon the time when the state where the obtained value according to the height difference becomes the value showing that the height difference is greater than the predetermined value continues.